Texas Christian University
CoSc 20803-015 - Fall, 2015
Course Syllabus *

Class Time:	TR 9:30AM - 10:50AM
Class Location:	TUC 243
Final Exam:	Tuesday, Dec 15 (8:00AM -10:30AM)
Instructor:	Dr. James Comer
Email:	j.comer@tcu.edu
Office:	TUC 208
Phone:	817-257-7166 (CoSc Office)
Office Hours:	MW 10:00 AM - 11:30 AM, TR 12:00 PM - 2:00 PM, and by other times by appointment
Text:	*Java Software Structures* by Lewis and Chase Pearson, 2014

Grading:	Exam #1	20%
	Exam #2	20%
	Final Exam (*comprehensive*)	20%
	Programming Assignments	38%
	Attendance at one CSS Meeting	2%

Policies

PLEASE!!!!! - No hats are to be worn in this class at any time!!!!

TCU email addresses (e.g., `j.d.doe@tcu.edu`) will be used in this class for communications and for configuring the TURNIN client). It is expected that you will be checking your email regularly.

Grades & Cellphones

* Final grades in this course will be the traditional letter grades (i.e., there will be NO +/- **distinctions)**.
* Cellphone usage is **NOT** allowed in class under any circumstances. TURN THEM OFF BEFORE ENTERING THE CLASSROOM!! *I will endeavor to remember to do the same with mine.*

Objectives

Before attempting this course, students must be able to:	*After completion of the course, students will be able to:*
(a) implement a relatively sophisticated program in Java on the department's computer systems. (b) develop software that employs graphical user interfaces, mulit-dimensional arrays and vectors, pointers, recursion, and reference and value parameters (i.e., adequate programming maturity).	(a) recognize the use of ADTs as a good design strategy for specifying the logical properties of a data type. (b) be able to analyze sophisticated programming problems and choose appropriate algorithms for their solution. (c) be able to demonstrate an understanding of how arrays are implemented and their associated mapping functions. (d) be able to demonstrate familiarity with advanced data structures (stacks, queues, linked lists, trees (binary, balanced, search, threaded), hashing functions and collision resolution methods). (e) express an understanding of the use of order analysis to evaluate competing data structures. (f) design, implement, perform, and report on an experimental analysis of competing data structures or algorithsm. (g) analyze time-space tradeoffs, static-dynamic structure tradeoffs, and operation efficiency tradeoffs for common data structures. (h) be familiar with sorting and searching concepts, algorithms, and their analysis and performance (i) be able to apply data structure concepts to solving real-world problems.

1. **Participation in Student Organization (CSS)**:
   Your participation in the Computer Science Society is worth 2 pts of your final grade. This can be accomplished by attending at least one meeting of the CSS club. *You will be rewarded with 2 points for your attendance – make sure your name appears on the roster list that will be circulated.*

   If you are unable to attend, you may write a short paper, due within one week of a meeting, that covers the same subject matter as the speaker's presentation at that meeting.

2. During this semester the preferred development environment for all CoSc 20803 programming assignments will be the *Eclipse IDE* (the same development environment being used in CoSc 10403). This software is available for free download at the Eclipse website.

3. Solutions to the assigned programs are to be written in Java. **You are allowed to discuss possible approaches to solving problems; however, under no circumstances may you share code with other students.**

   Your programming solutions should reflect your own individual work. Collusion with or plagiarism of another student's work will result in a lab grade of zero and may jeopardize you academically.

   Using someone else's code, even if modified, or receiving excessive assistance from others, is

considered cheating or collusion and is grounds for disciplinary action. You should refer to the Academic Code of Conduct Policy of the TCU Undergraduate Studies Bulletin.

4. Programming assignments may be handed out as hardcopy or posted on the Computer Science Department's web server (or both) . ***Follow the CoSc 20803 link.***

5. All assignments are due as specified on the schedule shown below. **Late assignments will be accepted only up to one week late (7 days) and will be assessed a penalty of 10 points per day** late, including week-ends and holidays. ALL project files associated with assignments **must** be "zipped" together and submitted (with TURNIN) by midnight on the date due in order to avoid being considered late

   A HARDCOPY PRINTOUT OF THE ASSIGNMENT'S REQUIRED "USER'S MANUAL". SHOULD BE TURNED IN TO THE DEPARTMENT'S SECRETARY (TUC 207) BY 11:00AM ON FRIDAY (THE DAY FOLLOWING THE ASSIGNMENT'S DUE DATE).

   Absolutely, **under NO circumstances**, will any lab assignment be accepted after **12:00 noon, Friday, December 11** (the last Study Day).

   On the schedule, **FCP** stands for "first class period" of the week and **LCP** stands for "last class period" of the week.

6. **Note:** *The first two assignments in this class will be rather lengthly and will require that you turn in* a copy of your GUI *code at approximately mid-point during the development period. This code will NOT be accepted late.*

   NOTE: you must thoroughly document your code using standards like that posted on the COSC 10403 website. Your grade for your code will be heavily reduced for failure to document.

7. You should keep backup copies of all assignments that you turn in just in case an assignment should be misplaced. Retain all assignments that are returned to you until after the end of the course; if a question arises about your grade you will be expected to be able to produce all returned work.

8. I encourage you to come to my office when you have questions about course material, your grade, etc. You are not limited to the hours listed above. However, if you elect not to come to class then do not expect to come see me for an explanation of the missed material.

9. You will be assigned from 4 to 5 programming labs this semester. Each is to be implemented as a *stand-alone* Java application employing a graphical user interface. At least one of the labs will be a linked list application, one will be a tree application, one will study sorting algorithms, and one will study searching algorithms. The instructor reserves the right to make a 5th assignment on a topic yet to be determined.

10. If you miss an examination, or other assignment due date, you will **not** be allowed to make up the assignment unless you have a University approved excuse from the Health Center, Dean of Science and Engineering, University Ministries, etc. If you know that you will not be able to take a quiz, exam, lab demo, etc. for a legitimate reason (e.g. a University sponsored function in which you are participating) then it is your responsibility to make other arrangements with me at least one week prior to the original due date.

11. All students are required to take the Final examination on the date and time specified.

12. The above policies are subject to change during the course of the semester.

13. The last day to withdraw from this course is Monday, November 9, 2015.

Note: the textbook is encyclopedic in nature. As such, no attempt will be made to cover all topics in detail. Some algorithms and topics will be skipped entirely or discussed only superficially. In addition, I may provide handouts showing other algorithms that we may choose to consider. **The topics discussed in class will constitute the material that will be covered on exams**.

Disabilities Statement

Texas Christian University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 regarding students with disabilities. Eligible students seeking accommodations should contact the Coordinator of Student Disabilities Services in the Center for Academic Services located in Sadler Hall, 1010. Accommodations are not retroactive, therefore, students should contact the Coordinator as soon as possible in the term for which they are seeking accommodations. Further information can be obtained from the Center for Academic Services, TCU Box 297710, Fort Worth, TX 76129, or at (817) 257-6567.

Disclaimer

The above policies, schedules, etc. are subject to change at the instructor's discretion. In addition, I may choose to give a 5^{th} lab.

This information appears on the web at: http://csfaculty.tcu.edu/comer/20803/coursesyllabus.html